

Supporting Information

Reversibly Electroswitchable Luminescence in Thin Films of Organic/inorganic Hybrid Assemblies

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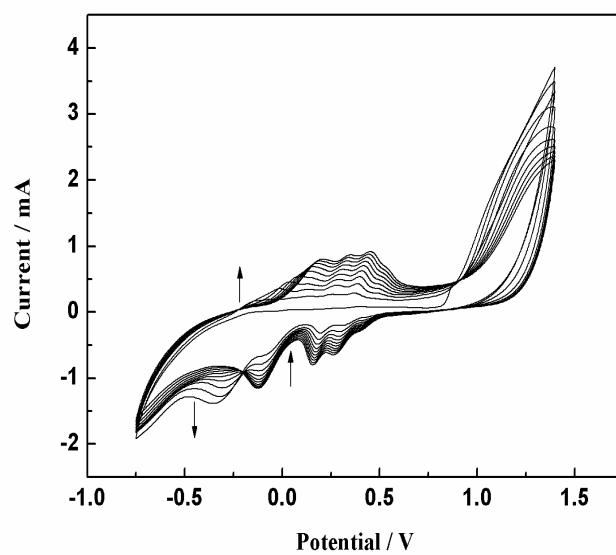


Fig. S1 Cyclic voltammograms (CVs) of electropolymerization of PEDOT/PMO₁₂ films on ITO electrode. The electrochemical experiments were performed from -0.75 to 1.4 V at scan rate of 0.1 V s⁻¹, in 0.2 M H₂SO₄ containing 10 mM EDOT and 0.5 mM PMO₁₂.

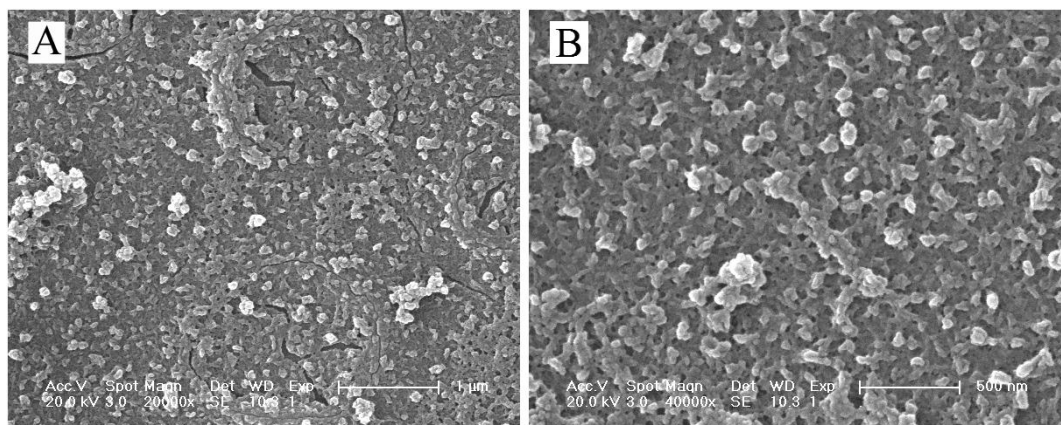


Fig. S2 Typical SEM characterization of PEDOT polymer films at different magnifications. The electrochemical experiments were performed from -0.75 to 1.4 V at scan rate of 0.1 Vs^{-1} for 5 cycles on ITO electrodes, in 0.2 M H_2SO_4 containing 10 mM EDOT.

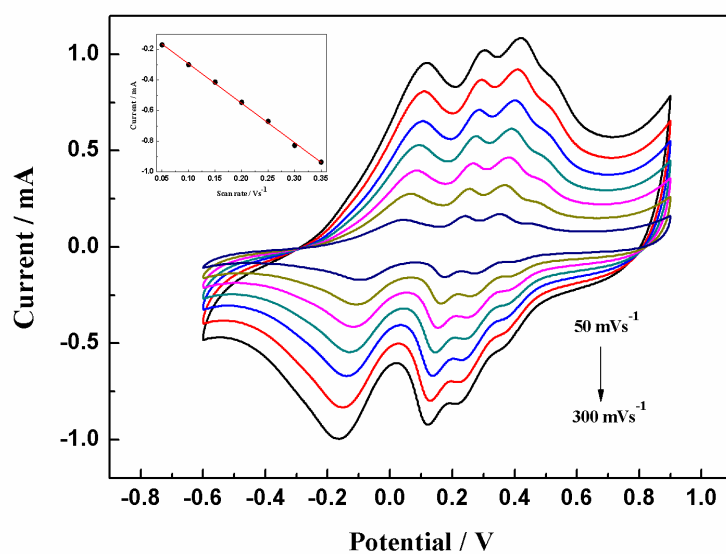


Fig. S3 CVs of PEDOT/PMo₁₂ electrode at different scan rates (from inner to outer): 0.05, 0.1, 0.15, 0.2, 0.25, 0.3 and 0.35 v s⁻¹. Inset: plot of peak current (I_p) vs. scan rate.

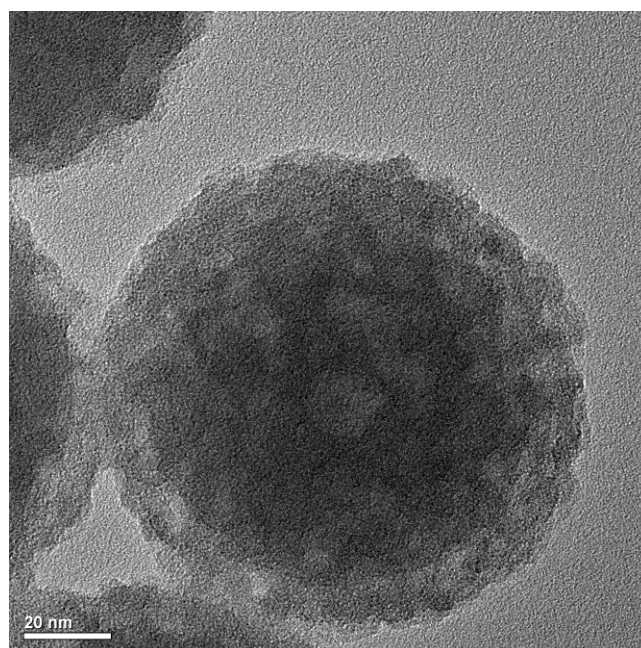


Fig. S4 Transmission Electron Microscope image of one synthesized PYDS.

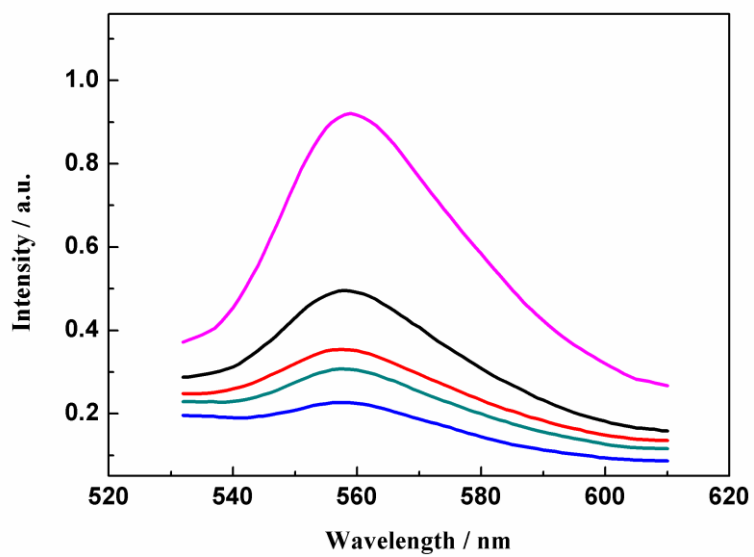


Fig. S5 Luminescence spectra of the hybrid films as a function of applying potential (from inner to outer: -0.8 V, -0.6 V, -0.1 V, 0.3 V, 0.6 V). All the samples were measured in 0.1 M HAc-NaAc buffer solution (pH = 4.5).

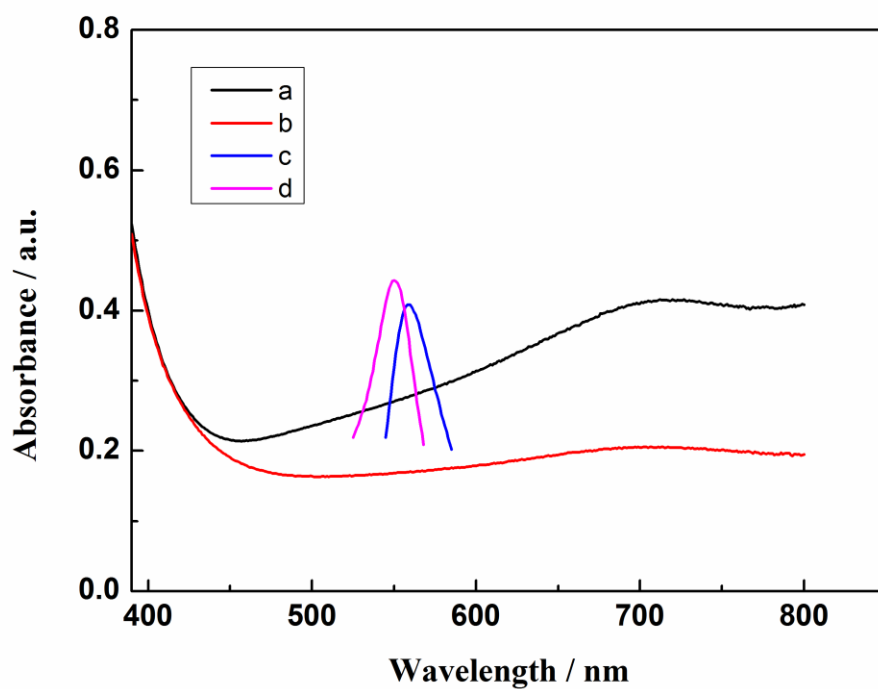


Fig. S6 Absorption spectra of PMo_{12} films on ITO electrode at applied potential of -0.6 V (a) and 0.6 V (b) and fluorescence excitation (d) and emission spectra (c) of PYDS in 0.1 M HAc-NaAc buffer solution ($\text{pH} = 4.5$).

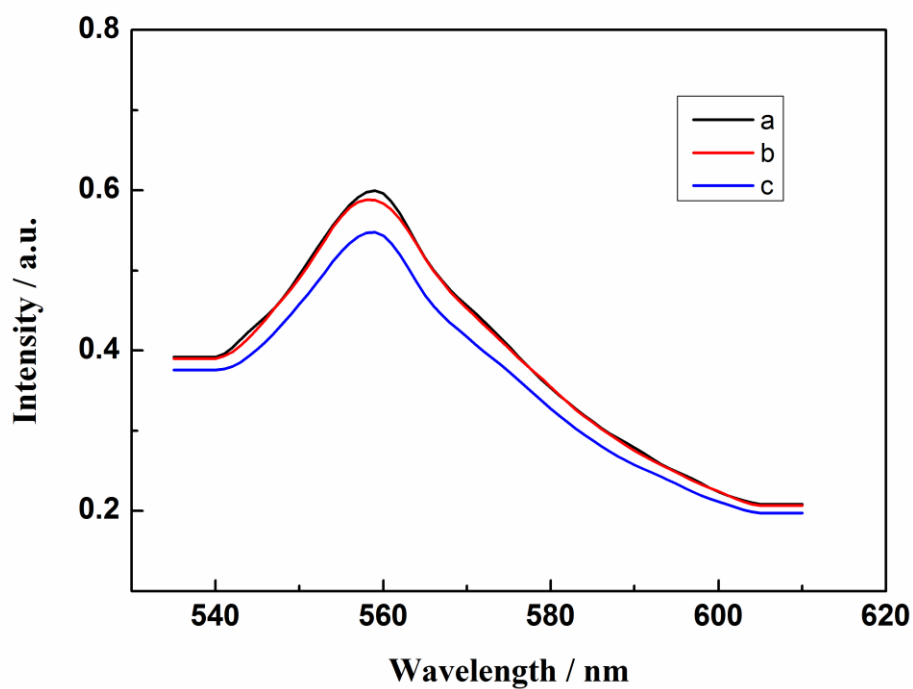


Fig. S7 Luminescence switching of $(\text{PAH}/\text{PMO}_{12})_2/(\text{PYDS}/\text{PSS})_2$ films at applied potential from 0.6 V (a), to -0.6 V (c) and to 0.6 V (b). The experiments were performed in 0.1 M HAc-NaAc buffer solution (pH = 4.5).